
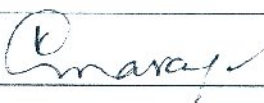


Documentation Sheet	
 National Aerospace Laboratories	Class <i>Unrestricted</i> No. of Copies 6 Hardcopies + Softcopy for distribution
Title <i>Surface Modeling Studies for Manned Space Modules and Launch Vehicles</i>	
Author/s <i>Raghvendra B J, Balamati Choudhury, R M Jha</i>	
Division <i>ALD</i>	NAL Project No: <i>FAC-00-01-06</i>
Document No. <i>PD AL 1101</i>	Date of issue <i>Feb. 2011</i>
Contents <input type="text" value="31"/> Pages <input type="text" value="14"/> Figures <input checked="" type="checkbox"/> Tables <input type="text" value="3"/> References	
External Participation <i>Nil</i>	
Sponsor <i>CSIR-NAL</i>	
Approval	<i>Head, ALD</i> 
Remarks <i>x</i>	
Keywords <i>Surface Modeling, Space Module, Launch Vehicle</i>	
Abstract <i>Surface modeling of aerospace structures is required a priori, for RF field analysis of the concave interior environment. A typical manned space module is modeled by hybridizing finite segments of the right circular cylinder and the general paraboloid of revolution (GPOR) frustum. Similarly surface modeling of a typical launch vehicle is done by hybridizing a GPOR, a right circular cylinder and a conical frustum. As the surface modeling is done using parametric equations, it is readily amenable to the implementation of quasi-analytical ray tracing method for RF field analysis inside the launch vehicles.</i>	